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For: Method of Measuring Discrete, Incremental Feedback from Motion Devices

## CLAIMS

- 1        1. A method of measuring discrete incremental feedback from motion systems that  
2        create feedback pulses, the method comprising:
  - 3                establishing a minimum feedback pulse sampling period;
  - 4                accumulating feedback pulses during a sampling period;
  - 5                upon the first feedback pulse after the minimum feedback pulse sampling period,
  - 6                ending the current sampling period and beginning the next sampling period; and
  - 7                determining the quantity of feedback pulses accumulated during the current
  - 8                sampling period.
- 1        2. The method of measuring discrete, incremental feedback from motion systems of  
2        claim 1 wherein the minimum feedback pulse sampling period is comprised of one or more  
3        periods of a clock signal.
- 1        3. The method of measuring discrete, incremental feedback from motion systems of  
2        claim 2 wherein the period of the clock signal is less than the shortest period between feedback  
3        pulses.
- 1        4. The method of measuring discrete, incremental feedback from motion systems of  
2        claim 3 wherein the period of the clock signal is less than or equal to one-tenth the shortest  
3        period between feedback pulses.
- 1        5. The method of measuring discrete, incremental feedback from motion systems of  
2        claim 2 wherein the minimum feedback pulse sampling period is a multiple of the clock signal  
3        period.

1           6.       The method of measuring discrete, incremental feedback from motion systems of  
2    claim 2 wherein sampling periods can begin and end only concurrently with a clock signal.

1           7.       The method of measuring discrete, incremental feedback from motion systems of  
2    claim 6 further comprising calculating estimated motion velocity by dividing the number of  
3    feedback pulses accumulated during a sampling period by the time period of such sampling  
4    period.

1           8.       The method of measuring discrete, incremental feedback from motion systems of  
2    claim 7 wherein the time period of such sampling period is determined by counting the number  
3    of clock signals occurring during the sampling period.

1           9.       A method of measuring discrete, incremental feedback from motion systems that  
2    create feedback pulses, the method comprising:  
3                  providing for a variable feedback pulse sampling period; and  
4                  accumulating feedback pulses during each sampling period.